Experimental Goal Reported by Participants	% of participants
Examine deception or trust	45
Examine how Estimators estimate varies with advice given	21
Don't know	10
Decision making or biases	5
Alternative response	18

Supplementary Table 1. Debriefing: Experiment Goal

We asked all participants at the end of the experiment what they thought the purpose of the experiment was. Participants' answers to this open-ended question could be grouped into five displayed in the left column of the table. Right column indicates the percentage of participants who provided that answer. Note that none of the participants said that they believed the study was to examine escalation of deception.

	Nucleus Accumbens	Dorsolateral Prefrontal Cortex	Anterior Insula
Time Weighted Dishonesty & BOLD			
Self-Serving-Other-Harming condition	t_{24} = 1.37, p=0.18	t_{24} = 0.73, p=0.74	t_{24} = 1.42, p=0.17
Self-Harming-Other-Serving condition	t_{24} = 0.10, p=0.92	t_{24} = -2.32, p=0.03	t_{24} = -1.16, p=0.26
Self-Serving-Other-Harming vs Self-Harming-Other-Serving	t_{24} = 0.48, p=0.64	t_{24} = 2.18, p=0.04	t_{24} = 1.71, p=0.10
Prediction Analysis (reduction in BOLD on trial t relative to trial t-1 predicting escalation of dishonesty on trial t+1 relative to t)			
Self-Serving-Other-Harming condition	t_{24} = 0.11, p=0.92	t_{24} = 1.25, p=0.23	t_{24} = 2.11, p=0.05
Self-Harming-Other-Serving condition	t_{24} = -0.56, p=0.58	t_{24} = -0.96, p=0.35	t_{24} = -0.16, p=0.88
Self-Serving-Other-Harming vs Self-Harming-Other-Serving	t_{24} = 0.49, p=0.63	t_{24} = 1.64, p=0.11	t_{24} = 1.92, p=0.07

Supplementary Table 2. Supplementary fMRI results

To examine whether the results observed in the amygdala could be generalized to other regions in the brain, which have been shown to play other roles in dishonesty, we tested three additional ROIs post-hoc: Nucleus Accumbens, Dorsolateral Prefrontal Cortex and the Anterior Insula. Table displays results of one sample and paired sample tests in each ROI for the time weighted dishonesty regressor and the prediction analysis. N=25.

Perception of Estimator	% of participants respond: No	% of participants respond: Yes
Estimator aware of the different conditions? [Experiment 1]	72	28
Reservations about partner? [Experiment 2]	96	4
Partner was a confederate: Did you suspect this? [Experiment 2]	71	29

Supplementary Table 3. Debriefing: Perception of Estimator

We asked all participants at the end of the experiment what their perception of the Estimator was. In Experiment 1, the majority of participants (72%) said they did not think the estimator was aware of the different conditions. Of those that thought the estimator was aware, the majority believed this was because their advice varied a lot over the course of the experiment. In Experiment 2, participants were given a more extensive debriefing with closed-ended questions. Specifically, we asked participants if they had any reservations about their partner. 96% of the participants answered “no”. Those who answered yes were then given an open-ended question to explain what these reservations were. This was then followed by a closed-ended question where they selected from a list of 6 options what reservations they had (options listed were: (1) Not a team player, (2) Bad at estimating, (3) Was too fast to respond, (4) Was too slow to respond, (5) Was not a real participant, (6) Other (not listed above)). Only two participants selected the option “partner was not a real participant”. At the end of this debriefing session *all* participants were explicitly told that the partner was a confederate. They were then asked to indicate whether they suspected this at any point before we had revealed this information. Only 29% of participants said “yes” and those participants were then excluded from all analysis.

Strategy Reported by Participants	% of participants (Self Serving, Other Harming)	% of participants (Self Serving, Other Serving)
Overestimate amount of money in jar	71	77
Give accurate estimates	18	15
Alternative strategy	11	8
Gradually increase overestimations	0	0

Supplementary Table 4. Debriefing: Strategy

In Experiment 1, participants were asked at the end of the experiment to report the strategy they used in the conditions when dishonesty was self-serving. This question was open ended. 17 responses were excluded from analysis because they were missed or could not be meaningfully interpreted (e.g. "+/- £3 more", "try my best"). Out of the remaining responses, 71% (n=32) indicated that their strategy was to overestimate the amount of money in the jar during the Self-Serving-Other-Harming condition, and 77% (n=37) indicated so for the Self-Serving-Other-Serving condition. Only 18% (n=8) of participants indicated that their strategy was to give accurate estimates for the former, and 15% (n=7) indicated as much for the latter. An additional 11% (n=5) of participants and 8% (n=4) reported an alternate strategy, respectively. 0% indicated that they attempted to gradually increase overestimations.